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Response of Wegener's granulomatosis to anti-CD20 chimeric monoclonal antibody therapy.

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We report on the successful, compassionate use of the anti-CD20 chimeric monoclonal antibody rituximab in a patient with chronic, relapsing cytoplasmic antineutrophil cytoplasmic antibody (cANCA)-associated Wegener's granulomatosis (WG). The patient initially responded to treatment with glucocorticoids and cyclophosphamide. However, bone marrow toxicity during cyclophosphamide treatment of a relapse precluded its further use. Azathioprine and mycophenolate mofetil treatment had failed to maintain remission of the WG, and methotrexate was contraindicated. Because the patient's 5-year course was characterized by close correlation of cANCA levels with disease activity, selective elimination of cANCA was deemed a treatment option for his latest relapse. He was given 4 infusions of 375 mg/M2 of rituximab and high-dose glucocorticoids. Complete remission was associated with the disappearance of B lymphocytes and cANCA. Glucocorticoid treatment was then discontinued. After 11 months, the cANCA recurred, and rituximab therapy was repeated, without glucocorticoids. At 8 months after the second course of rituximab (18 months after the first course), the patient's WG has remained in complete remission. Elimination of B cells by rituximab therapy may prove to be an effective and safe new treatment modality for ANCA-associated vasculitis and possibly other autoimmune diseases. This modality warrants closer examination in a carefully conducted clinical trial.

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